

‘Unassigned’ Projects

13-August-98

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- ***Event monitoring***
- ***DAQ monitoring***
- ***Accelerator interface***

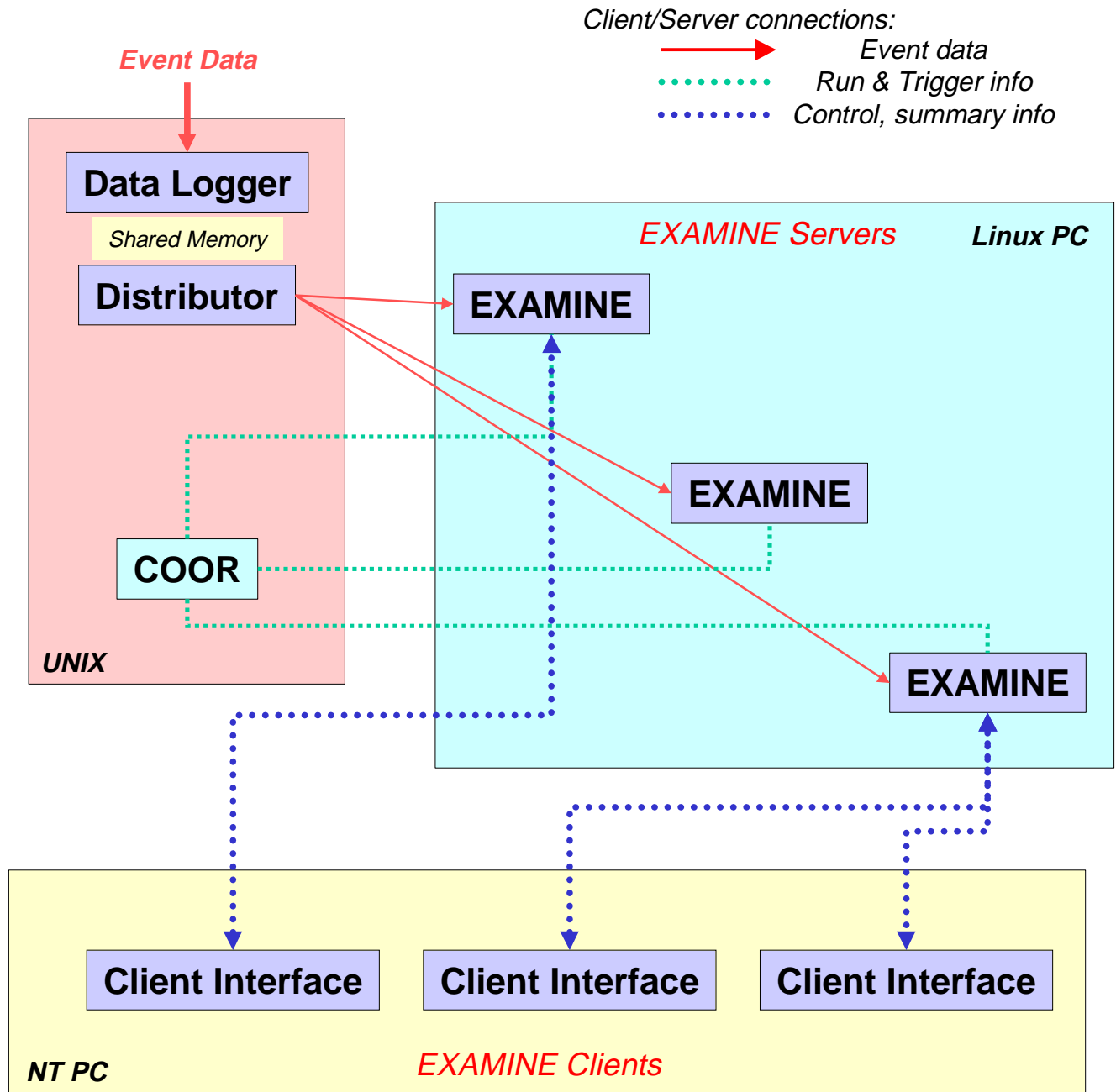
My view of the requirements and designs

Event Monitoring

- ***Specific need:***
 - **Someone to manage and oversee all aspects of the project:**
 - *evaluating user (detector group and beyond) requirements*
 - *detailed design of system*
 - *coding, debugging*
 - *oversee operation*
- ***Requirements (0th pass):***
 - **Multiple distributors**
 - **Multiple EXAMINE consumers**
 - **Multiple data streams**
 - **Trigger / stream selection capability**
 - **Rates:**
 - *aggregate of several Hz*
 - *individual approaching a Hz*
 - **Accumulation of distributions, histograms, etc**
 - **Control: book, delete, clear, etc**

Event Monitoring (cont'd)

- **Design (0th pass):**



Event Monitoring (cont'd)

- *How much of DART / Hoist can we use?*
- *What is the architecture?*
 - I envision the path:
 - *Data Logger*
 - *Event Distributor*
 - *EXAMINE 'server' (Processor Farm)*
 - connected to COOR
 - *EXAMINE 'client' (Control Room)*
- *How is the event structured?*
- *What is the program structure? Does it follow the Offline framework?*
- *What rates are needed / possible?*
- *PAW / ROOT / D00M / etc ?*
- *Who will do this???*

DAQ Monitoring

- ***Specific need:***
 - **Someone to manage and oversee all aspects of the project:**
 - *learn what is available from L1 / L2 / L3*
 - *learn how COOR organizes triggers*
 - *learn how to present information to users*
 - *detailed design*
 - *coding, debugging*
 - *oversee operation*
- ***Requirements (0th pass):***
 - **Cohesive, understandable presentation of trigger configuration and operation**
 - **Flexibility to handle new trigger definitions**

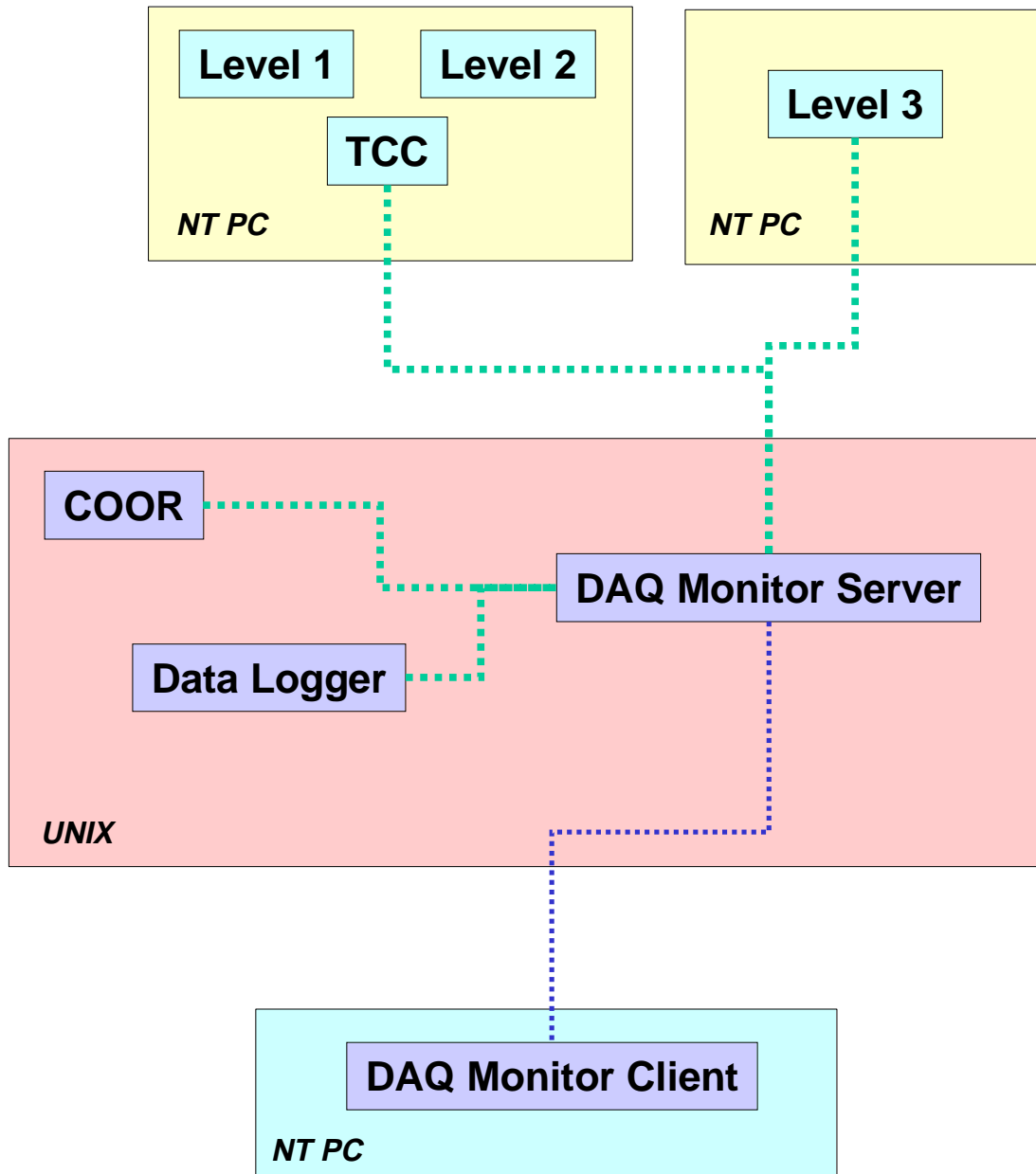
DAQ Monitoring (cont'd)

- **Design (0th pass):**

Client/Server connections:

..... Run & Trigger info

..... Control, summary info



DAQ Monitoring (cont'd)

- *Need someone with global DAQ understanding to coordinate this*
- *Very much a 'consumer rated' product - it has to be useful in the Control Room*
- *GUI intensive - need skills*
- *Who will do this?*

Accelerator Interface

- ***Specific need:***
 - **Someone to manage and oversee all aspects of the project:**
 - *learn how Accelerator systems operate*
 - *learn what D0 needs from the Accelerator*
 - *learn what the Accelerator needs from D0*
 - *detailed design*
 - *coding, debugging*
 - *oversee operation*
- ***Requirements (0th pass):***
 - **Allow Accelerator operations to monitor:**
 - *beam conditions at D0, as measured by D0 detector*
 - *D0 operational status, including possible beam abort conditions*
 - **Allow D0 to acquire Accelerator info:**
 - *beam conditions, as determined via Accelerator controls system*
 - **Develop bi-directional communications**

Accelerator Interface (cont'd)

- ***Design (0th pass):***
 - Produce a general 'bridge' between the two control systems, ACNET and EPICS, which allows bi-directional access to Control System information
 - Produce a 'server' on the D0 end to provide (via the Control System?) access to other D0 local information
- ***Need 'person to person' communication with Beams Div now to understand needs, possibilities***
- ***Need an ACNET - EPICS bridge***
- ***How is all relevant information (losses, beam position) collected, recorded, and transmitted?***